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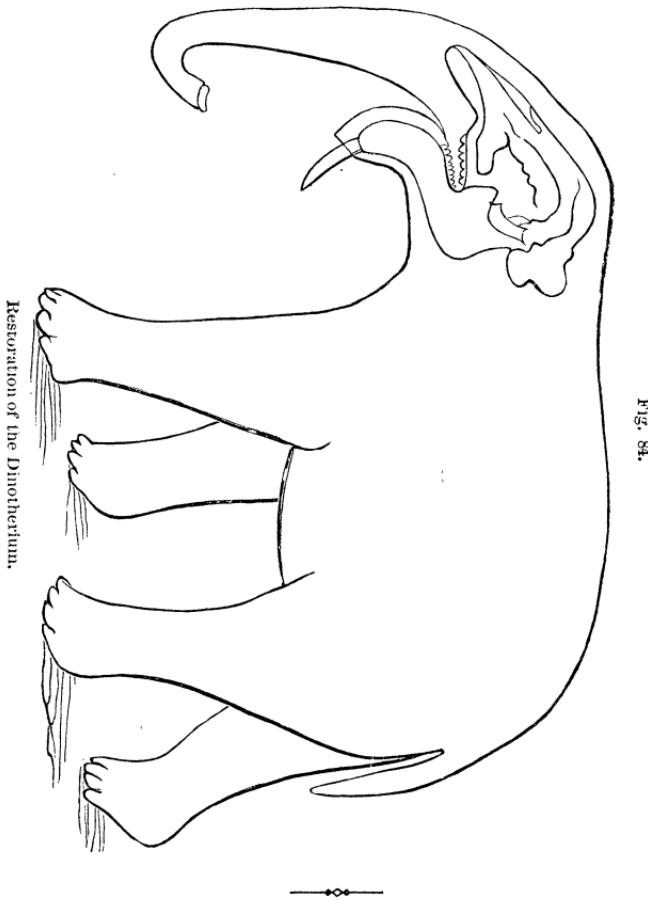
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RESTORATION OF THE DINOTHERIUM.—I enclose an outline restoration of the Dinotherium, that I found lately among the St. Petersburg Transactions, presenting the latest ideas of Dr. Brandt in regard to that animal.—S. F. BAIRD.



MICROSCOPY.

DEVELOPMENT OF GAS IN PROTOPLASM.—Dr. Th. Engelmann has observed in *Arcella*, a minute protozoon like an *Amœba* with a shell, a periodical development of gas. Dr. Engelmann made his observations on specimens confined in a gas chamber, and describes minutely how gradually in the protoplasmic hyaline substance of the animalcule, black points arise, which as gradually coalesce, forming a distinct air bubble. This gas can after a time be absorbed again, and reasons are given for believing that a sort of volition is exercised by the *Arcellæ* in the secretion and

absorption of the gas which they use in the manner of a float or air-bladder. The air-bubbles are not connected with the contractile vacuoles, or with the nuclei. The air-bubbles it is important to observe, do not occur in the non-granular protoplasm of the pseudopodia, but in the granular substance, and are not spherical but of an irregular form, which as Dr. Engelmann observes, proves that the protoplasm is not in the condition of aggregation of a fluid. The chemical composition of the gas thus so remarkably developed by the *Arcellæ* was not determined, nor the mechanism (if any exist) of the formation and disappearance of the air-bubbles. The discovery is of importance from two points of view: in the first place, for the development of gas in protoplasm as a physiological phenomenon; in the second place, for the supposed voluntary nature of this development, of which this exceedingly simple organism makes use for the purpose of locomotion.—*Quarterly Journal of Science*.

THE LARGEST INFUSORIUM KNOWN.—In the “Institut” of the 24th of January is an interesting paper on the Gregarinadæ, which are well known to represent one of the simplest forms of animal life, consisting of a nucleated cell, which under certain conditions invests itself with a transparent membrane, becoming, as it is termed, incysted. The nucleus disappears and the substance of the body then breaks up into innumerable sporosperms, navicellæ, or elongated minute corpuscles, which, being set free by the bursting of the enclosing capsule, become distributed in the various organs of many animals. A well-marked form is found in the alimentary canal of the common beetle. M. Edouard v. Beneden has lately discovered a remarkable form, to which he has applied the name *Gregarina gigantea*, in the intestine of the lobster. It has been subjected to MM. Gluge and Schwann of the Académie Royale de Belgique for examination, and they report that its length is no less than 16 mm., and its breadth 15 mm., or nearly two-thirds of an inch. It presents, in the membrane which forms its wall, a contractile layer, to which M. Beneden had previously called attention in other species. The interior of the animal is occupied by a viscous liquid containing granular particles, with a nucleus and nucleolus. This last exhibits a remarkable phenomenon. At first it is single, but in the course of a few seconds the nucleus appears to be filled with a large number of small refractile corpuscles, which are so many nucleoli. Some of them then augment considerably in size, whilst the primary nucleolus gradually disappears. With the exception of the yolk of the egg of birds, and some other animals, the *Gregarina gigantea* constitutes the largest known cell. — *The Academy*.



ANTHROPOLOGY.

ABORIGINAL RELIC FROM TRENTON, NEW JERSEY.—In the “Proceedings of the Academy of Natural Sciences of Philadelphia,” and in local papers, we have frequently called attention to various large deposits of arrowheads, axes, etc., and to interesting isolated specimens of curi-